

102
1, 3, 6, 11, 16-17,
20, 22, 24

103
4-5, 7-12, 14-15
18, 19, 21-22
112 (2)
not normal use

SEC.912

of 12/12.

What is claimed is:

1. An overlay key, comprising:

a first overlay key having a first main overlay pattern and a first auxiliary overlay pattern; and

a second overlay key having a second main overlay pattern and a second

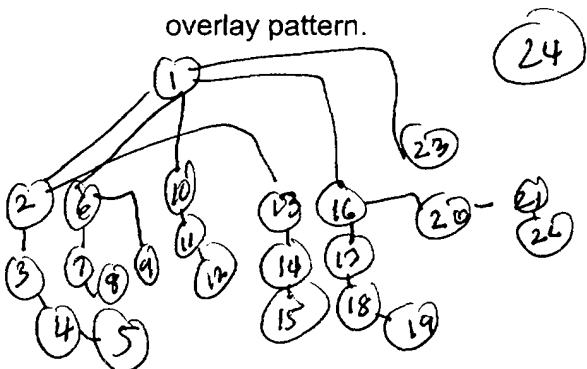
auxiliary overlay pattern, the second auxiliary overlay pattern being formed at a location corresponding to the first auxiliary overlay pattern.

2. The overlay key of claim 1, wherein the first and second overlay keys have a frame shape.

3. The overlay key of claim 2, wherein the first auxiliary overlay pattern is formed at a corner portion of the first overlay key.

4. The overlay key of claim 3, wherein a length of the first main overlay pattern is equal to a length of a corresponding side of the second main overlay pattern.

5. The overlay key of claim 4, wherein the first main overlay pattern is defined by imaginary lines extended from two parallel outside lines of the second main overlay pattern.



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(4/5)
10/15

(7/10) 9, 10-11
12,

6. The overlay key of claim 1, wherein the first auxiliary overlay pattern includes a plurality of bar patterns spaced apart from each other.

7. The overlay key of claim 6, wherein the second auxiliary overlay pattern includes a plurality of hole patterns spaced apart from each other.

8. The overlay key of claim 7, wherein an interval between two adjacent bar patterns is larger than a width of the hole pattern.

9. The overlay key of claim 6, wherein the second auxiliary overlay pattern includes a plurality of second bar patterns having a smaller width than the bar patterns.

10. The overlay key of claim 1, wherein the first auxiliary overlay pattern includes a plurality of hole patterns.

11. The overlay key of claim 10, wherein the second auxiliary overlay pattern includes a plurality of bar patterns.

12. The overlay key of claim 11, wherein a width of the hole pattern of the first auxiliary overlay pattern is larger than a width of the bar pattern of the second auxiliary overlay pattern.

13. The overlay key of claim 2, wherein the first auxiliary overlay pattern is formed at a location adjacent to a corner portion of the first overlay key.

14. The overlay key of claim 13, wherein a length of the first main overlay pattern is equal to a length of a corresponding side of the second main overlay pattern.

15. The overlay key of claim 14, wherein the first main overlay pattern is defined by imaginary lines extended from two parallel outside lines of the second main overlay pattern.

16. The overlay key of claim 1, wherein the first and second overlay keys have a substantially rectangular shape.

17. The overlay key of claim 16, wherein the first auxiliary overlay pattern is formed on a corner portion of the first overlay key.

18. The overlay key of claim 17, wherein a length of the first main overlay pattern is equal to a length of a corresponding side of the second main overlay pattern.

19. The overlay key of claim 18, wherein the first main overlay pattern is defined by imaginary lines extended from two parallel outside lines of the second main overlay pattern.

20. The overlay key of claim 16, wherein the first auxiliary overlay pattern is formed at a location adjacent to a corner portion of the first overlay key.

21. The overlay key of claim 20, wherein a length of the first main overlay pattern is equal to a length of a corresponding side of the second main overlay pattern.

22. The overlay key of claim 21, wherein the first main overlay pattern is defined by imaginary lines extended from two parallel outside lines of the second main overlay pattern.

23. The overlay key of claim 1, wherein the first and second main overlay patterns are for measuring an overlay degree using an optical microscope, and the first and second auxiliary overlay patterns are for measuring an overlay degree using an in-line SEM (scanning electron microscope).

24. An overlay key, comprising:

a first overlay key including a first main overlay pattern and a first auxiliary overlay pattern; and

a second overlay key including a second main overlay pattern and a second auxiliary overlay pattern,

wherein the first and second overlay keys are formed at a location wherein a location of the first and second main overlay keys do not correspond to each other.

25. A method of manufacturing an overlay key, comprising:

forming a first overlay key on a wafer, the first overlay key including a first main overlay pattern and a first auxiliary overlay pattern;

forming an intermediate layer over an entire surface of the wafer including the first overlay key;

forming a second overlay key on the intermediate layer, the second overlay key including a second main overlay pattern and a second auxiliary overlay pattern, the second auxiliary overlay pattern being formed at a location corresponding to the first auxiliary overlay pattern; and

etching the intermediate layer using the second auxiliary overlay pattern as a mask, so that the second auxiliary overlay pattern is copied to the intermediate layer.

26. The method of claim 25, further comprising: